IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Shengfang Jin	Art Unit	: 1646
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Title	: RESISTANCE SEQUENCES AND USES THEREOF		

Attention: Official Draftsman
Commissioner for Patents
Washington, D.C. 20231

<u>TRANSMITTAL OF FORMAL DRAWINGS</u>

In response to the Notice to File Missing Parts mailed April 3, 2001, please substitute the enclosed 7 sheets of formal drawings for the corresponding drawings presently in the application.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 3I MAY 0I

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AATCTTTTATTTTATCGATGTTAACAAGCTTAGTAATCGATGCCACGTCGAGGGGTGTCGACC

CACGCGTCCGGGAGTAGGTTGAGCTCGCCTGTTCTCCCATTGTCAGCCAGTCTATTTCCAG

ATTGTTTGAACTTCTCTGGCCGCACAATACAGGAAGGAAGACTAAAGCAGCAAAGGGACCTA

CAGCGTCTGCAGCATGGGCTGGTTAACTAGGATTGTCTGTCTTTTCTGGGGAGTATTACTTA

CAGCAAGAGCAAACTATCAGAATGGGAAGAACAATGTGCCAAGGCTGAAATTATCCTACAAA

GAAATGTTGGAATCCAACAATGTGATCACTTTCAATGGCTTGGCCAACAGCTCCAGTTATCAT

ACCTTCCTTTTGGATGAGGAACGGAGTAGGCTGTATGTTGGAGCAAAGGATCACATATTTTC

ATTCGACCTGGTTAATATCAAGGATTTTCAAAAGATTGTGTGGCCAGTATCTTACACCAGAAG

AGATGAATGCAAGTGGGCTGGAAAAGACATCCTGAAAGAATGTGCTAATTTCATCAAGGTAC

TTAAGGCATATAATCAGACTCACTTGTACGCCTGTGGAACGGGGGCTTTTCATCCAATTTGC

ACCTACATTGAAATTGGACATCATCCTGAGGACAATATTTTTAAGCTGGAGAACTCACATTTT

GAAAACGGCCGTGGGAAGAGTCCATATGACCCTAAGCTGCTGACAGCATCCCTTTTAATAGA

TGGAGAATTATACTCTGGAACTGCAGCTGATTTTATGGGGCGAGACTTTGCTATCTTCCGAA

CTCTTGGGCACCACCACCCAATCAGGACAGAGCAGCATGATTCCAGGTGGCTCAATGATCC

AAAGTTCATTAGTGCCCACCTCATCTCAGAGAGTGACAATCCTGAAGATGACAAAGTATACTT

TTTCTTCCGTGAAAATGCAATAGATGGAGAACACTCTGGAAAAGCTACTCACGCTAGAATAG

GTCAGATATGCAAGAATGACTTTGGAGGGCACAGAAGTCTGGTGAATAAATGGACAACATTC

CTCAAAGCTCGTCTGATTTGCTCAGTGCCAGGTCCAAATGGCATTGACACTCATTTTGATGA

ACTGCAGGATGTATTCCTAATGAACTTTAAAGATCCTAAAAATCCAGTTGTATATGGAGTGTT

TACGACTTCCAGTAACATTTTCAAGGGATCAGCCGTGTGTATGTATAGCATGAGTGATGTGA

GAAGGGTGTTCCTTGGTCCATATGCCCACAGGGATGGACCCAACTATCAATGGGTGCCTTAT

CAAGGAAGAGTCCCCTATCCACGGCCAGGAACTTGTCCCAGCAAAACATTTGGTGGTTTTGA

CTCTACAAAGGACCTTCCTGATGATGTTATAACCTTTGCAAGAAGTCATCCAGCCATGTACAA

TCCAGTGTTTCCTATGAACAATCGCCCAATAGTGATCAAAACGGATGTAAATTATCAATTTAC

ACAAATTGTCGTAGACCGAGTGGATGCAGAAGATGGACAGTATGATGTTATGTTTATCGGAA

CAGATGTTGGGACCGTTCTTAAAGTAGTTTCAATTCCTAAGGAGACTTGGTATGATTTAGAAG

AGGTTCTGCTGGAAGAAATGACAGTTTTTCGGGAACCGACTGCTATTTCAGCAATGGAGCTT

TCCACTAAGCAGCAACAACTATATATTGGTTCAACGGCTGGGGTTGCCCAGCTCCCTTTACA

CCGGTGTGATATTTACGGGAAAGCGTGTGCTGAGTGTTGCCTCGCCCGAGACCCTTACTGT

GCTTGGGATGGTTCTGCATGTTCTCGCTATTTTCCCACTGCAAAGAGACGCACAAGACGACA

AGATATAAGAAATGGAGACCCACTGACTCACTGTTCAGACTTACACCATGATAATCACCATG

GCCACAGCCCTGAAGAGAGAATCATCTATGGTGTAGAGAATAGTAGCACATTTTTGGAATGC

AGTCCGAAGTCGCAGAGAGCGCTGGTCTATTGGCAATTCCAGAGGCGAAATGAAGAGCGAA

AAGAAGAGATCAGAGTGGATGATCATATCATCAGGACAGATCAAGGCCTTCTGCTACGTAGT

FIG. 1A

CTACAACAGAAGGATTCAGGCAATTACCTCTGCCATGCGGTGGAACATGGGTTCATACAAAC
TCTTCTTAAGGTAACCCTGGAAGTCATTGACACAGAGCATTTGGAAGAACTTCTTCATAAAGA
TGATGATGGAGATGGCTCTAAGACCAAAGAAATGTCCAATAGCATGACACCTAGCCAGAAGG
TCTGGTACAGAGACTTCATGCAGCTCATCAACCACCCCAATCTCAACACGATGGATGAGTTC
TGTGAACAAGTTTGGAAAAGGGACCGAAAACAACGTCGGCAAAGGCCAGGACATACCCCAG
GGAACAGTAACAAATGGAAGCACTTACAAGAAAATAAGAAAGGTAGAAACAGGAGGACCCA
CGAATTTGAGAGGGCACCCAGGAGTGTCTGAGCTGCATTACCTCTAGAAACCTCAAACAAGT
AGAAACTTGCCTAGACAATAACTGGAAAAACAAATGCAATATACATGAACTTTTTTCATGGCA
TTATGTGGATGTTTACAATGGTGGGAAATTCAGCTGAGTTCCACCAATTATAAATTAAATCCA
TGAGTAACTTTCCTAATAGGCTTTTTTTCCTAATACC (SEQ ID NO:1)

FIG. 1B

GACAACAGGTAGAAAAATTCCTGGGCTCAGGCTGGAGTGACACCCTTTTCTTTCCCTAACAT
CTTCTACTCAGATACCTAAATTTAAGATTCAGGACAGCTGTCCCCAACTCTTACCATGTCTTT

TATAACTTGCTCCTTAACTTGCCCAACCTGTAGGCTATCTCATTTTCTCGCTTCACTCTGCAA
GGTTTATAACATGATGAATTTAAATAC (SEQ ID NO:2)   # FIG. 2B

GAATTCTCGAGCTCGTCGACCACGCCCTCCTTGTGCAAGAACTCTGAGCCCCAGGTGCAGG

AGGCTGAGGCCTGCAGAGAGACTTGCAGAGAGACCCAGCAAGCCATGGTGTTTCCATGGA

GATGTGAGGGTACTTACTGGGGCTCGAGGAACATCCTGAAGCTGTGGGTCTGGACACTGCT

CTGTTGTGACTTCCTGATACACCATGGAACTCACTGTTGGACTTACCATTATTCTGAAAAGCC

CATGAACTGGGAAAATGCTAGAAAGTTCTGCAAGCAAAATTACACAGATTTAGTCGCCATAC

AAAACAAGAGAGAAATTGAGTATTTAGAGAATACATTGCCCAAAAGCCCTTATTACTACTGGA

TAGGAATCAGGAAAATTGGGAAAATGTGGACATGGGTGGGAACCAACAAAACTCTCACTAAA

GAAGCAGAGAACTGGGGTGCTGGGGAGCCCAACAACAAGAAGTCCAAGGAGGACTGTGTG

GAGATCTATATCAAGAGGGAACGAGACTCTGGGAAATGGAACGATGACGCCTGTCACAAAC

GAAAGGCAGCTCTCTGCTACACAGCCTCTTGCCAGCCAGGGTCTTGCAATGGCCGTGGAGA

ATGTGTGGAAACTATCAACAATCACACGTGCATCTGTGATGCAGGGTATTACGGGCCCCAGT

GTCAGTATGTGGTCCAGTGTGAGCCTTTGGAGGCCCCTGAGTTGGGTACCATGGACTGCAT

CCACCCCTTGGGAAACTTCAGCTTCCAGTCCAAGTGTGCTTTCAACTGTTCTGAGGGAAGAG

AGCTACTTGGGACTGCAGAAACACAGTGTGGAGCATCTGGAAACTGGTCATCTCCAGAGCC

AATCTGCCAAGTGGTCCAGTGTGAGCCTTTGGAGGCCCCTGAGTTGGGTACCATGGACTGC

ATCCACCCCTTGGGAAACTTCAGCTTCCAGTCCAAGTGTGCTTTCAACTGTTCTGAGGGAAG

AGAGCTACTTGGGACTGCAGAAACACAGTGTGGAGCATCTGGAAACTGGTCATCTCCAGAG

CCAATCTGCCAAGAGACAAACAGAAGTTTCTCAAAGATCAAAGAAGGTGACTACAACCCCCT

CTTCATTCCTGTAGCCGTCATGGTCACCGCATTCTCGGGGCTGGCATTTCTCATTTGGCTGG

CAAGGCGGTTAAAAAAAGGCAAGAAATCTCAAGAAAGGATGGATGATCCATACTGATTCATC

CTTTGTGAAAGGAAAGCCATGAAGTGCTAAAGACAAAACATTGGAAAATAACGTCAAGTCCT

CCCGTGAAGATTTTACACGCAGGCATCTCCCACATTAGAGATGCAGTGTTTGCTCAACGAAT

CTGGAAGGATTTCTTCATGACCAACAGCTCCTCCTAATTTCCCCTCGCTCATTCATCCCATTA

ACCCTATCCCATAATGTGTGTCTATACAGAGTAGTATTTTATCATCTTTTCTGTGGAGGAACA

AGCAAAAGTGTTACTGTAGAATATAAAGACAGCTGCTTTTACTCTTTCCTAACTCTTGTTTCCT

AGTTCAATTCAGCACAGAAGCTAATGCCAAACACAGTGAAAATATGATCCATGAGTAATTGGA

AACTCAGACTCCTTGCGCATAGTACGTACCCTATGTAACATCGACAAAAATCTTTCATTTCCA

CCTCCAAAGAACAGTGCTCTATTCAAGTTGGGAAAGTCCTACTTCCTCTGTAGACCCACTAT

CTGTGAGTGACAGCCACTGTAGCTGTTCACATTAACCTTCCCCATCTCCTTTTCCTAGGAGA

ATAATTCCACACACTGCACCCCATGATGGCCACCAAACATCAAAGAAGGGAAAATCTCCTGC

ATTGAGTTTTAGTTTTGAGTTTTCCCTTCTCTTTATTAGATCTCTGATGGTTCCTTGAAGTCAG

TGTTCTGATGATTATTAATAGTTAATGATAACACAACCCACTCTCTTGGAGCTGATGTTATGAA

FIG. 2A

GTCGACCCACGCGTCCGCAGACCTAGTAGCTGTGGAAACCATGGCCCTGAGTGTCATGTGT
CTGGGCCTTGCCCTGCTTGGGGTCCTGCAGAGCCAGGCCCAGGACTCAACTCAGAACTTGA
TCCCTGCCCCATCTCTGCTCACTGTCCCCCTGCAGCCAGACTTCCGGAGCGATCAGTTCCG
GGGCAGGTGGTACGTTGTGGGCCTGGCAGGCAATGCGGTCCAGAAAAAAACAGAAGGCAG
CTTTACGATGTACAGCACCATCTATGAGCTACAAGAGAACAATAGCTACAATGTCACCTCCAT
CCTGGTCAGGGACCAGGACCAGGGCTGTCGCTACTGGATCAGAACATTTGTTCCAAGCTCC
AGGGCTGGCCAGTTCACTCTGGGAAATATGCACAGGTATCCTCAGGTACAGAGCTACAATG
TGCAAGTGGCCACCACGGACTACAACCAGTTCGCCATGGTATTTTTCCGAAAGACTTCTGAA
AACAAGCAATACTTCAAAATTACCCTGTATGGAAGAACCAAGGAGCTGTCCCCTGAACTGAA
GGAACGTTTCACCCGCTTTGCCAAGTCTCTGGGCCTCAAGGACGACAACATCATCTTCTCTG
TCTGTCTGCCACTCCATCTTTCCTGTTGCCAGAGAGCCACCTGGCTGCCCCACCAGCCACC
ATACCAAGGAGCATCTGGAGCCTCTTCTTATTTGGCCAGCACTCCCCATCCACCTGTCTTAA
CACCACCAATGGCGTCCCCTTTCTGCTGAATAAATACATGCCCCCAAAAAAAAAAAAAAAAGG
GCGGCCGC (SEQ ID NO:3)

FIG. 3A

MALSVMCLGLALLGVLQSQAQDSTQNLIPAPSLLTVPLQPDFRSDQFRGRWYVVGLAGNAVQK
KTEGSFTMYSTIYELQENNSYNVTSILVRDQDQGCRYWIRTFVPSSRAGQFTLGNMHRYPQVQS
YNVQVATTDYNQFAMVFFRKTSENKQYFKITLYGRTKELSPELKERFTRFAKSLGLKDDNIIFSVC
LPLHLSCCQRATWLPHQPPYQGASGASSYLASTPHPPVLTPPMASPFC (SEQ ID NO:4)

FIG. 3B

CCCCTTTTGGTTTTTGTTCTATCGACCCTAACAAGCTTAGTAATCGATGCCACTCGAGGCCAA

GAATTCATTACGAGCCTGAGCTCCTTCGGCTTTTTCCCCCCTTTTGCATCTTGTTTCCCGGGA

TACCTGCAACTCAAGGATGGATGCCCTGAGACTGGCAAATTCAGCTTTTGCTGTTGACTTGT

TCAAACAACTATGTGAAAGGGACCCAGCAGGAAACATTCTCTTCTCTCCAATATGCCTCTCTA

CTTCTCTGTCCCTTGCGCAAGTGGGCACCAAAGGCGACACAGCAAATGAAATTGGACAGGT

CCTTCATTTTGAGAATGTCAAAGATGTACCCTTTGGGTTTCAAACAGTCACTTCTGATGTTAA

TAAGCTCAGTTCTTTTTACTCTTTGAAACTTGTCAAGCGACTCTACATAGACAAATCTCTGAAC

CCTTCTACAGAATTTATCAGTTCTACCAAAAGACCATATGCAAAGAATTGGAAACTGTTGAC

TTCAAAGACAAACTGGAAGAAACGAAAGGTCAAATTAACAGCTCCATTAAGGAGCTCACAGA

TGGCCACTTTGAGGACATTTTGTCAGAGAACAGTATAAGTGACCAGACCAAAATCCTTGTGG

TTAATGCTGCCTACTTTGTTGGAAAGTGGATGAAGAAATTTCCGGAATCAGAAACAAAAGAAT

GTCCTTTCAGAATCAGCAAGACAGACACCAAACCCGTACAAATGATGAATCTTGAGGCCACT

TTCTGCTTGGGTAACATTGATGACATCAGCTGTAAGATCATAGAACTTCCTTTCCAGAATAAG

CATCTGAGTATGCTCATTGTGCTCCCCAAGGACGTGGAGGATGAGTCCACAGGCCTGGAGA

AGATTGAACAGCAACTCAACCCAGAAACATTGTTACAGTGGACCAACCCCAGTACCATGGCC

AATGCCAAAGTCAAACTTTCCCTCCCAAAGTTTAAGGTAGAAAAGATGATTGATCCCAAGGCT

AGTCTGGAAAGCCTAGGGCTGAAAAGTCTCTTCAATGAAAGTACATCGGATTTCTCTGGAAT

GTCAGAGACCAAGGGAGTGTCCCTGTCAAATGTGATTCATAGAGTATGCCTAGAAATAACCG

AAGATGGTGGTGAGTCCATCGAGGTGCCAGGGTCCCGGATCTTACAGCACAAGGATGAATT

CAATGCTGACCATCCATTTATTTATATCATTAGACACAACAAAACTCGAAACATCATTTTCTTT

GGCAAATTCTGTTCTCCTTAGCTGGCAGGGCCTTGCCAAGTCTCAGGGAACTTGTCTGTAGT

CGCAGAGCTCTGTAAACTTTGTATCCAGACAATCACTTTCTATACAATAAATTGTAAATGTTG

CTGAAAAAAAAAAAAAAAAAAAAAAAA (SEQ ID NO:5)

FIG. 4

GGTGGAGACTAAATATAATCTTTTATTTTATCGATGTTAACAAGCTTAGTAATCGATGCCACG
TCGAGGGGTGTCGACCCACGCGTCTCGCTTGCCTGTTCCTTTTCCACGCATTTTCCAGGATA
ACTGTGACTCCAGGCCCGCAATGGATGCCCTGCAACTAGCAAATTCGGCTTTTGCCGTTGAT
CTGTTCAAACAACTATGTGAAAAGGAGCCACTGGGCAATGTCCTCTTCTCTCCAATCTGTCT
CTCCACCTCTCTGTCACTTGCTCAAGTGGGTGCTAAAGGTGACACTGCAAATGAAATTGGAC
AGGTTCTTCATTTTGAAAATGTCAAAGATGTACCCTTTGGATTTCAAACAGTAACATCGGATG
TAAACAAACTTAGTTCCTTTTACTCACTGAAACTAATCAAGCGGCTCTACGTAGACAAATCTC
TGAATCTTTCTACAGAGTTCATCAGCTCTACGAAGAGACCCTATGCAAAGGAATTGGAAACT
GTTGACTTCAAAGATAAATTGGAAGAAACGAAAGGTCAGATCAACAACTCAATTAAGGATCTC
ACAGATGGCCACTTTGAGAACATTTTAGCTGACAACAGTGTGAACGACCAGACCAAAATCCT
TGTGGTTAATGCTGCCTACTTTGTTGGCAAGTGGATGAAGAAATTTCCTGAATCAGAAACAAA
AGAATGTCCTTTCAGAGTCAACAAGACAGACACCAAACCAGTGCAGATGATGAACATGGAGG
CCACGTTCTGTATGGGAAACATTGACAGTATCAATTGTAAGATCATAGAGCTTCCTTTTCAAA
ATAAGCATCTCAGCATGTTCATCCTACTACCCAAGGATGTGGAGGATGAGTCCACAGGCTTG
GAGAAGATTGAAAAACAACTCAACTCAGAGTCACTGTCACAGTGGACTAATCCCAGCACCAT
GGCCAATGCCAAGGTCAAACTCTCCATTCCAAAATTTAAGGTGGAAAAGATGATTGATCCCA
AGGCTTGTCTGGAAATCTAGGGCTGAAACATATCTTCAGCGAAGACACATCTGATTTCTCT
GGAATGTCAGAGACCAAGGGAGTGGCCCTATCAAATGTTATCCACAAAGTGTGCTTAGAAAT
AACTGAAGATGGTGGGGATTCCATAGAGGTGCCAGGAGCACGGATCCTGCAGCACAAGGAT
GAATTGAATGCTGACCATCCCTTTATTTACATCATCAGGCACAACAAAACTCGAAACATCATT
TTCTTTGGCAAATTCTGTTCTCCTTAAGTGGCATAGCCCATGTTAAGTCCTCCCTGACTTTTC
TGTGGATGCCGATTTCTGTAAACTCTGCATCCAGAGATTCATTTTCTAGATACAATAAATTGC
TAATGTTGCTGGATCAGGAAGCCGCCAGTACTTGTCATATGTAGCCTTCACACAGATAGACC
TTTTTTTTTTTTTTTCCAATTCTATCTTTTGTTTCCTTTTTTCCCATAAGACAATGACATACGCTTTT
AATGAAAAGGAATCACGTTAGAGGAAAAATATTTATTCATTATTTGTCAAATTGTCCGGGGTA
GTTGGCAGAAATACAGTCTTCCACAAAGAAAATTCCTATAAGGAAGATTTGGAAGCTCTTCTT
CCCAGCACTATGCTTTCCTTCTTTGGGATAGAGAATGTTCCAGACATTCTCGCTTCCCTGAAA
GACTGAAGAAAGTGTAGTGCATGGGACCCACGAAACTGCCCTGGCTCCAGTGAAACTTGGG
CACATGCTCAGGCTACTATAGGTCCAGAAGTCCTTATGTTAAGCCCTGGCAGGCAGGTGTTT
ATTAAAATTCTGAATTTTGGGGATTTTCAAAAGATAATATTTTACATACACTGTATGTTATAGAA
CTTCATGGATCAGATCTGGGGCAGCACCCTATAAATCACCACCTTAATATGCTGCAACAAAA
TGTAGAATATTCAGACAAAATGGATACATAAAGACTAAGTAGCCCATAAGGGGTCAAATTTTG
CTGCCAAATGCGTATGCCACCAACTTACAAAAACACTTCGTTCGCAGAGCTTTTCAGATTGT

FIG. 5A

GGAATGTTGGATAAGGAATTATAGACCTCTAGTAGCTGAAATGCAAGACCCCAAGAGGAAGT
TCAGATCTTAA (SEQ ID NO:6)

FIG. 5B

	Semaphorin D	Maspin	B94	mel-14 Antigen	24p3	Proliferin
Expression in EMT6 tumors	Up-regulated in CDDP resistant tumor	Down-regulated in CDDP resistant tumor	Up-regulated in CDDP resistant tumor	Up-regulated in CDDP resistant tumor	Up-regulated in CDDP resistant tumor	Up-regulated in CDDP resistant tumor
Expression in EMT6 cell lines	Remain up-regulated in CDDP resistant cell line to passage 13 (passage 3, 6, 10, and 13 checked)	Remain down-regulated in CDDP resistant cell line to passage 3	Remain up-regulated in CDDP cell line to passage 10	Remain up-regulated in CDDP cell line to passage 10	Remain up-regulated in CDDP cell line to passage 10	Remain up-regulated in CDDP cell line to passage 10
Expression in multi-cell line pairs (A2780, UCLA, U937, HL60, SCC25 pairs)	Higly expressed in SCC25 CDDP cell line, not significant-ly expressed in other cell line pairs.	Highly expressed in SCC25 wild type cell line (and HL60 AD cell line), not signifi-cantly expressed in other cell line pairs.	Different-ially expressed in HL60 and U937 cell lines (lower in resistant cell line).	Different-ially expressed in HL60 cell lines (high in HL60 and HL60Rev, low in HL60AD)	Slightly up-regulated in SCC25 CDDP cell line; not signifi-cantly different-ially expressed in other cell line pairs.	Slightly up-regulated in A2780AD and SCC25 CDDP cell lines; Not signifi-cantly differ-entially expressed in other cell line pairs.

FIG. 6